

I. Listing of the Claims

1. (Previously Presented): A medical grasping device comprising:

an elongate control member having an atraumatic distal tip section and a proximal end portion, said elongate control member further including a grasping portion with a plurality of loops located proximal said distal tip section, said proximal end portion of the elongate control member being comprised of a high elongation material, the proximal end portion being bonded to a low elongation section of the elongate control member extending distally from the proximal end portion;

an outer sheath with a passageway therethrough surrounding said elongate control member and relatively movable with respect thereto; and

the outer sheath and the elongate control member being relatively moveable to urge said plurality of loops from a distal end of said outer sheath and retraction thereinto.

2. (Original): The grasping device of claim 1, wherein said elongate control member is a flexible cannula defining a lumen extending therethrough into which a guide wire is receivable and movable with respect thereto.

3. (Cancelled).

4. (Original): The grasping device of claim 1, wherein said outer sheath is flexible and kink-resistant and has lubricious outer and inner surfaces.

5. (Original): The grasping device of claim 1, wherein said atraumatic distal tip section tapers to a blunt and rounded tip.

6. (Previously Presented): The grasping device of claim 1, further comprising a control assembly disposed at a proximate end of said outer sheath and the elongate control member being relatively moveable to urge said plurality of loops from a distal end of said outer sheath and retraction thereinto, wherein said elongate control member is a flexible cannula defining a lumen extending therethrough into which a guide wire is receivable and movable with respect thereto;

wherein said control assembly includes an actuation section that is easily grippable for reciprocal movement along a handle to actuate said elongate control member with respect to said outer sheath to deploy and retract said grasping portion, respectively.

7. (Original): The grasping device of claim 6, wherein said actuation section includes a connecting block affixed to said elongate control member and is disposed within a longitudinal slot of said handle and is movable along said slot between opposite ends thereof.

8. (Previously Presented): The grasping device of claim 1, wherein said plurality of loops comprises a plurality of preformed wire loops.

9. (Previously Presented): The grasping device of claim 8, wherein said plurality of wire loops self-deploy transversely upon emerging from said distal end of said outer sheath, the wire loops self-deploying transversely proximal the atraumatic distal tip section.

10. (Original): The grasping device of claim 8, wherein each of said wire loops is substantially circular upon full deployment.

11. (Previously Presented): The grasping device of claim 10, wherein each of said wire loops includes side sections wherein each side section overlaps with a side section of a different adjacent loop of the plurality of wire loops.

12. (Previously Presented): The grasping device of claim 8, wherein each of said wire loops is pie-shaped and includes arcuate outer sections having a radius that expands to a radius of a deployment site of a vessel into which the grasping device is inserted.

13. (Previously Presented): The grasping device of claim 1, wherein said grasping portion comprises four preformed wire loops that self-deploy transversely upon emerging from said distal end of said outer sheath approximately equally spaced angularly about a longitudinal axis of said elongate control member and thereby generally expands to occupy a full cross-section of a vessel into which the grasping device is inserted.

14. (Original): The grasping device of claim 1, wherein said grasping portion comprises a plurality of wire loops that each are formed from a superelastic alloy.

15. (Original): The grasping device of claim 1, wherein said grasping portion comprises a plurality of wire loops having proximal end portions that are

joined to said elongate control member at affixation joints and initially extend axially from said elongate control member even when said wire loops emerge from said distal end of said outer sheath and self-deploy transversely of a longitudinal axis of the grasping device.

16. (Original): The grasping device of claim 15, wherein each of said wire loops includes an arcuate outer section that upon deployment extends toward a wall of a vessel into which the grasping device is inserted.

17. (Original): The grasping device of claim 16, wherein each of said wire loops includes arcuate side sections that extend toward an axial center of said grasping portion and then curve gradually toward said distal end of said elongate control member to proximal ends that are affixed by said affixation joints thereto and are in axial alignment therewith adjacent to said affixation joints.

18. (Original): The grasping device of claim 17, wherein said wire loops comprise nitinol wire segments.

19. (Original): The grasping device of claim 18, wherein each of said wire loops including said proximal ends are within a cold-worked bend of a respective one of said nitinol wire segments.

20. (Previously Presented): The grasping device of claim 1, wherein:

said elongate control member is a flexible cannula defining a lumen extending therethrough into which a guide wire is receivable and movable with respect thereto;

said outer sheath is flexible and kink-resistant and has lubricious outer and inner surfaces;

said control assembly includes an easily grippable actuation section along a handle to actuate said elongate control member with respect to said outer sheath; and

said grasping portion comprises a plurality of preformed wire loops of nitinol that upon deployment extend generally forwardly and radially outwardly to substantially traverse the cross-sectional area of the vessel wall into which the grasping device is inserted, each of said wire loops including an arcuate outer section of complementary shape to a vessel wall portion upon deployment, and including side sections that extend toward an axial center of said grasping portion and then curve gradually toward said distal end of said elongate control member to proximal end sections that are affixed by affixation joints to said elongate control member and are in axial alignment therewith adjacent to said affixation joints.

21. (Previously Presented): A medical grasping device comprising:

an elongate control member having an atraumatic distal tip section and a proximal end portion, the elongate control member further including a grasping portion with a plurality of loops located proximal the distal tip section, the elongate control member being comprised of a low elongation material section and a high elongation material section, the low elongation material section extending

continuously between the proximal end portion and the atraumatic distal tip section for low elongation distal to the proximal end portion, the proximal end portion being comprised of a high elongation material section for tension absorption when the elongate control member is urged distally;

an outer sheath with a passageway therethrough surrounding the elongate control member and relatively movable with respect thereto; and

the outer sheath and the elongate control member being relatively moveable to urge said plurality of loops from a distal end of said outer sheath and retraction thereinto.

22. (Previously Presented): The grasping device of claim 21, wherein the elongate control member being configured to transfer torque to the grasping portion.

23. (Previously Presented): The grasping device of claim 21, wherein the high elongation material section continuously extends from the low elongation material section to a proximal end of the elongate control member.

24. (Previously Presented): The grasping device of claim 21, wherein the high elongation material section is bonded to the low elongation material section.